AMENDMENTS TO THE CLAIMS

A detailed listing of all claims that are, or were, in the present application, irrespective of whether the claim(s) remains under examination in the application are presented below. The claims are presented in ascending order and each includes one status identifier. Those claims not cancelled or withdrawn but amended by the current amendment utilize the following notations for amendment: 1. deleted matter is shown by strikethrough or double brackets; and 2. added matter is shown by underlining.

1. (Currently Amended) A method of separating and/or enriching prokaryotic DNA, comprising the steps of:

a. contacting at least one prokaryotic DNA, present in solution, with a protein which specifically binds prokaryotic DNA and has 25% to 35% homology with the wild type CPGB protein, thereby forming a protein-DNA complex, and

b. ~~separation of~~ separating said complex.

2. (Original) The method according to claim 1, wherein the protein comprises the amino acid sequence of SEQ-ID No. 2.

3. (Previously Presented) The method according to claim 1, wherein the protein is capable of recognizing non-methylated CpG motifs.

4. (Previously Presented) The method according to claim 1, wherein separation is followed by a step for separating the DNA from the protein of the complex.

5. (Previously Presented) The method according to claim 1, wherein the protein is bound to a carrier.

6. (Original) The method according to claim 5, wherein the protein is bound directly to the carrier.

7. (Original) The method according to claim 5, wherein the protein is bound to the carrier via an antibody directed against it.

8. (Original) The method according to claim 5, wherein the protein is bound to the carrier via a spacer.

9. (Original) The method according to claim 8, wherein a diamino hexane residue is used as the spacer.

10. (Previously Presented) The method according to claim 5, wherein the carrier is provided as a matrix, as microparticles or as a membrane.

11. (Original) The method according to claim 10, wherein sepharose is used as the matrix.

12. (Previously Presented) The method according to claim 1, wherein separation is effected by means of an antibody or antiserum directed against the protein.

13. (Previously Presented) The method according to claim 1, wherein separation is effected by means of electrophoresis.

14. (Previously Presented) The method according to claim 6, wherein the protein is an antibody or a corresponding antiserum directed against non-methylated CpG motifs.

15. (Previously Presented) The method according to claim 1, wherein the solution contains a mixture of eukaryotic and prokaryotic DNA.

16. (Original) The method according to claim 15, wherein the prokaryotic DNA is bacterial DNA.

17. (Previously Presented) The method according to claim 15, wherein the solution is a body fluid or is derived therefrom.

18. (Currently Amended) The method according to ~~any one of~~ claim 15, wherein separation is achieved by means of a filter which filters the corresponding DNA-protein complexes.

19. (Original) The method according to claim 18, wherein the protein is immobilized to a filter matrix.

20. (Cancelled).

21. (Previously Presented) The method according to ~~any one of claims 1 to 19~~ claim 1, wherein after step b) the prokaryotic DNA is amplified in a step c).

22. (Previously Presented) The method according to claim 21, further comprising the steps of:

a) isolating the prokaryotic DNA from the protein-DNA complex,

b) denaturating the double-stranded DNA,

c) hybridising the individual strands of the DNA with complementary primers,

d) generating double-strand fragments via reaction with polymerases and

e) repeating these steps up to the desired degree of amplification.

23. (Previously Presented) The method according to claim 22, further comprising the steps of:

a) cloning the isolated prokaryotic DNA sequences into vectors,

b) transforming suitable host cells with these vectors,

c) cultivating these transformed cells,

d) isolating the vectors from these cells and

e) isolating the DNA.

24. (Previously Presented) A kit for enriching and/or separating prokaryotic DNA by means of a method according to claim 1.

25. (Previously Presented) A test kit for detection of prokaryotic DNA by means of a method according to claim 1, using one or several sets of specific primers.

26. (Previously Presented) The method according to claim 17, wherein the body fluid is full blood, serum, plasma, cell preparations from full blood, urine, liquor, pleural liquid, pericardial liquid, peritoneal liquid, synovial liquid or bronchoalveolar lavage.

Please add new claims 27, 28, and 29 as follows:

27. (New) A method of separating and/or enriching non-methylated DNA from a mixture of non-methylated and methylated DNA, comprising:

a. contacting at least one non-methylated DNA present in a solution with a protein specifically binding non-methylated DNA, thereby forming a protein-DNA complex, said protein having between about 25% and 35% homology with a wild type CPGB protein; and

b. separating said complex.

28. (New) The method according to claim 27, wherein said method includes a diagnosis of diseases having a specific methylation pattern.

29. (New) The method of claim 28, wherein said specific methylation pattern indicates the presence of cancer.